

REMARKS

In this Amendment, claims 1-3, 5-8, 10, 13-15, 17, 20 and 23 are amended. Many of the amendments are to eliminate means plus function language and to make other clarifications, all without the intention of narrowing the scope of any of the claims and indeed expanding the scope of the claims. Claims 16, 18, 19, 21, 22 and 24 have been cancelled without prejudice or disclaimer. New claims 25-30 have been added. No new matter has been added. Claims 1-15, 17, 20, 23 and 25-30 are pending in the present application. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claims 1, 2, 5, 7, 8, 10 and 20-24 were rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2005/0037269 to Levinson ("Levinson"). Applicant respectfully traverses these rejections for at least the following reasons.

Claims 21, 22 and 24 have been cancelled without prejudice or disclaimer. Thus, their rejection in view of Levinson is now moot.

Applicant respectfully submits that the cited portions of Levinson fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 1. Similarly, Applicant respectfully submits that the cited portions of Levinson fail to disclose, teach or suggest a device manufacturing method comprising, *inter alia*, selectively controlling the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 23.

The cited portions of Levinson fail to provide any disclosure, teaching or suggestion regarding a heater configured to selectively control the temperature of anything.

Therefore, Applicant respectfully submits that independent claims 1 and 23 are believed to be allowable. Claims 2, 5, 7, 8, 10, 20 and 25 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1, and for the additional features recited therein. Claims 26 and 27 depend from claim 23 and are, therefore, patentable for at least the same reasons provided above related to claim 23, and for the additional features recited therein. Thus, Applicant respectfully requests that the rejection

of claims 1, 2, 5, 7, 8, 10 and 20-24 under 35 U.S.C. §102(e) in view of Levinson should be withdrawn and the claims be allowed.

Claims 1, 2, 5, 10, 14, 20 and 23 were rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent Application Publication No. 2005/0048223 to Pawloski et al. ("Pawloski et al."). Applicant respectfully traverses these rejections for at least the following reasons.

Applicant respectfully submits that the cited portions of Pawloski et al. fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 1. Similarly, Applicant respectfully submits that the cited portions of Pawloski et al. fail to disclose, teach or suggest a device manufacturing method comprising, *inter alia*, selectively controlling the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 23.

The cited portions of Pawloski et al. fail to provide any disclosure, teaching or suggestion regarding a heater configured to selectively control the temperature of anything.

Therefore, Applicant respectfully submits that independent claims 1 and 23 are believed to be allowable. Claims 2, 5, 10, 14, 20 and 25 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1, and for the additional features recited therein. Claims 26 and 27 depend from claim 23 and are, therefore, patentable for at least the same reasons provided above related to claim 23, and for the additional features recited therein. Thus, Applicant respectfully requests that the rejection of claims 1, 2, 5, 10, 14, 20 and 23 under 35 U.S.C. §102(e) in view of Pawloski et al. should be withdrawn and the claims be allowed.

Claims 1, 5, 6, 10, 11, 16 and 23 were rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,610,683 to Takahashi et al. ("Takahashi et al."). Applicant respectfully traverses these rejections for at least the following reasons.

Applicant respectfully submits that the cited portions of Takahashi et al. fail to disclose, teach or suggest a lithographic apparatus comprising, *inter alia*, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 1. Similarly, Applicant respectfully submits that the cited portions of Takahashi et al. fail to disclose, teach or suggest a device

manufacturing method comprising, *inter alia*, selectively controlling the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 23.

The Examiner refers to col. 6, lines 32-35 of Takahashi et al. as disclosing “controlling the temperature of the liquid.” However, Applicant respectfully submits that this does not disclose, teach or suggest, for example, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid. Rather, the Takahashi et al. merely disclose, teach or suggest controlling the temperature of the liquid, rather than selectively controlling the temperature, and therefore size, of bubbles of a particular composition. A possible advantage of the claimed invention is that there may be achieved “a significantly enhanced bubble removal rate without undue influence on the immersion liquid. The improved removal rate is achieved by increasing the size of the bubbles in the immersion liquid by heating. The increased bubble size renders them more responsive to most methods of bubble removal. This is achieved without adverse heating effects in the immersion liquid, or surrounding temperature sensitive components...” Applicant’s specification, paragraph 119.

Therefore, Applicant respectfully submits that independent claims 1 and 23 are believed to be allowable. Claims 5, 6, 10, 11, 16 and 25 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above related to claim 1, and for the additional features recited therein. Claims 26 and 27 depend from claim 23 and are, therefore, patentable for at least the same reasons provided above related to claim 23, and for the additional features recited therein. Thus, Applicant respectfully requests that the rejection of claims 1, 5, 6, 10, 11, 16 and 23 under 35 U.S.C. §102(b) in view of Takahashi et al. should be withdrawn and the claims be allowed.

Claim 9 was rejected under 35 U.S.C. §103(a) as being obvious in view of Levinson and further in view of Japanese Patent Application Publication No. 10-303114 to Suwa (“Suwa”). Applicant respectfully traverses these rejections for at least the following reasons.

As discussed above, the cited portions of Levinson fail to disclose, teach or suggest independent claim 1. Claim 9 depends from independent claim 1, and is, therefore, patentable over the cited portions of Levinson for at least the same reasons provided above related to claim 1, and for the additional features recited therein.

Further, the cited portions of Suwa fail to overcome the shortcomings of the cited portions of Levinson with respect to independent claim 1. For example, the cited portions of

Suwa fail to provide any disclosure, teaching or suggestion regarding a lithographic apparatus comprising, *inter alia*, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 1. The cited portions of Suwa simply fail to make any disclosure, teaching or suggestion regarding a heater configured to selectively control the temperature of anything.

Therefore, Applicant respectfully submits that the Examiner has failed to make a *prima facie* case of obviousness and that independent claim 1 is believed to be allowable. Claim 9 depends from claim 1 and is, therefore, patentable for at least the same reasons provided above related to claim 1, and for the additional features recited therein. Thus, Applicant respectfully requests that the rejection of claim 9 under §103(a) in view of Levinson further in view of Suwa should be withdrawn and the claims be allowed.

Claim 15 was rejected under 35 U.S.C. §103(a) as being obvious in view of Levinson and further in view of United States Patent Application Publication No. 2005/0174549 to Duineveld et al. ("Duineveld et al."). Applicant respectfully traverses these rejections for at least the following reasons.

As discussed above, the cited portions of Levinson fail to disclose, teach or suggest independent claim 1. Claim 15 depends from independent claim 1, and is, therefore, patentable over the cited portions of Levinson for at least the same reasons provided above related to claim 1, and for the additional features recited therein.

Further, the cited portions of Duineveld et al. fail to overcome the shortcomings of the cited portions of Levinson with respect to independent claim 1. For example, the cited portions of Duineveld et al. fail to provide any disclosure, teaching or suggestion regarding a lithographic apparatus comprising, *inter alia*, a selective heater configured to selectively control the temperature, and therefore size, of bubbles of a particular composition in the liquid as recited in claim 1. The cited portions of Duineveld et al. simply fail to make any disclosure, teaching or suggestion regarding a heater configured to selectively control the temperature of anything.

Therefore, Applicant respectfully submits that the Examiner has failed to make a *prima facie* case of obviousness and that independent claim 1 is believed to be allowable. Claim 15 depends from claim 1 and is, therefore, patentable for at least the same reasons provided above related to claim 1, and for the additional features recited therein. Thus,

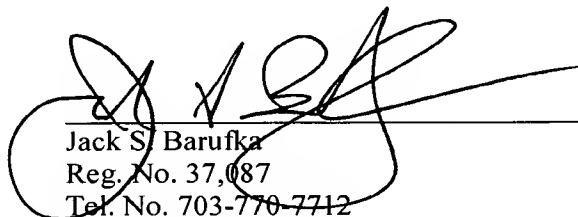
Applicant respectfully requests that the rejection of claim 15 under §103(a) in view of Levinson further in view of Duinveld et al. should be withdrawn and the claims be allowed.

Further, new claims 28-30 are patentable over the references cited herein because those references fail to disclose, teach or suggest a lithographic projection apparatus comprising, inter alia, a particle input device configured to introduce particles into the liquid; and a particle removal device configured to remove the particles from the liquid as recited in independent claim 28. Claims 29 and 30 depend from claim 28 and are, therefore, patentable for at least the same reasons provided above related to claim 28, and for the additional features recited therein. Applicant notes that claim 28 is substantially similar to now cancelled claim 18 rewritten in independent form. Examiner noted that claim 18 would be allowable if rewritten in independent form. Accordingly, Applicants considers claims 28-30 allowable.

All rejections and objections have been addressed. It is respectfully submitted that the present application is in condition for allowance, and a notice to that effect is earnestly solicited. Should there be any questions or concerns regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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